

Figure 1

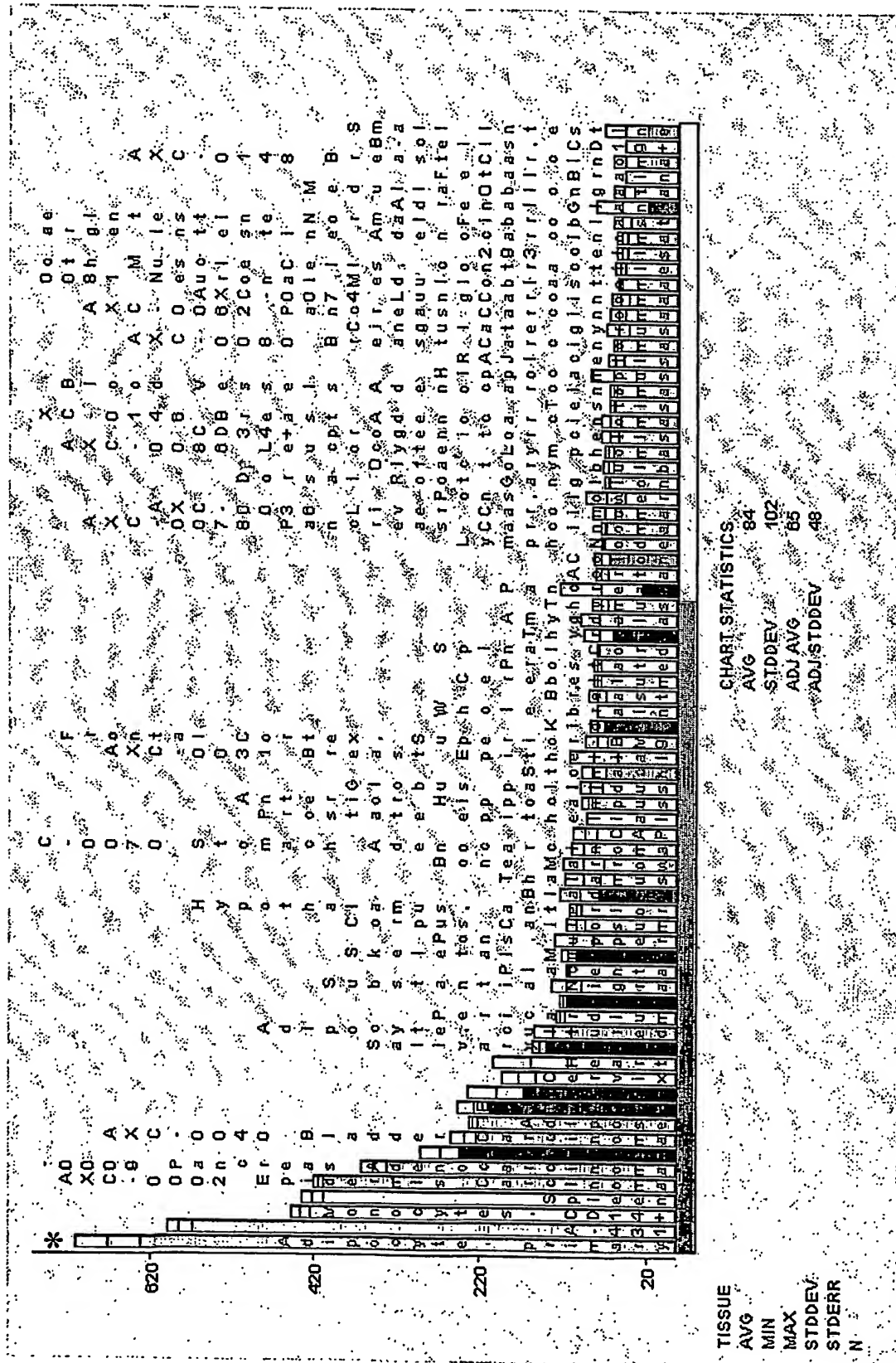


Figure 2
RUP25 G_i - coupled constitutive activity in melanophore

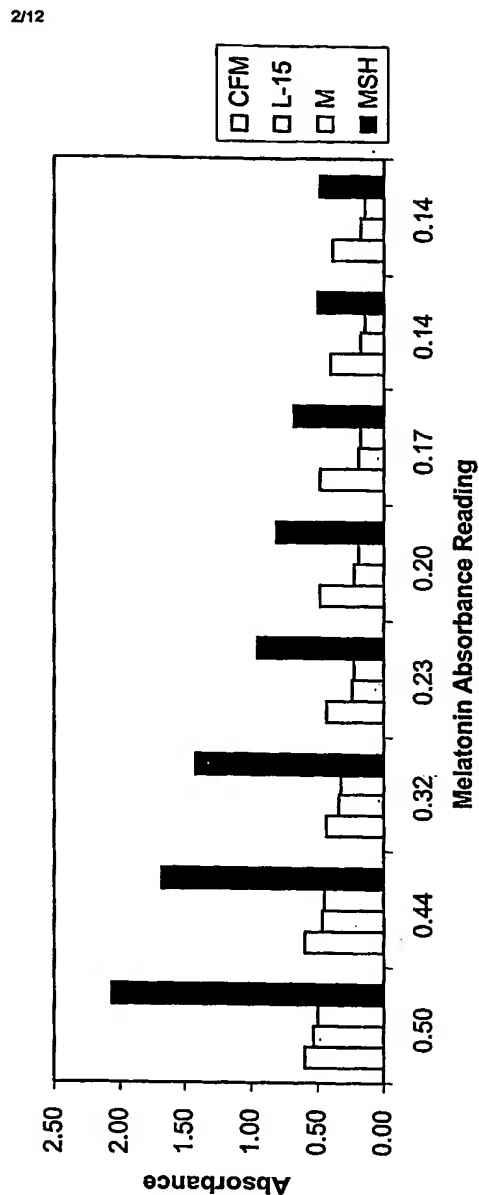
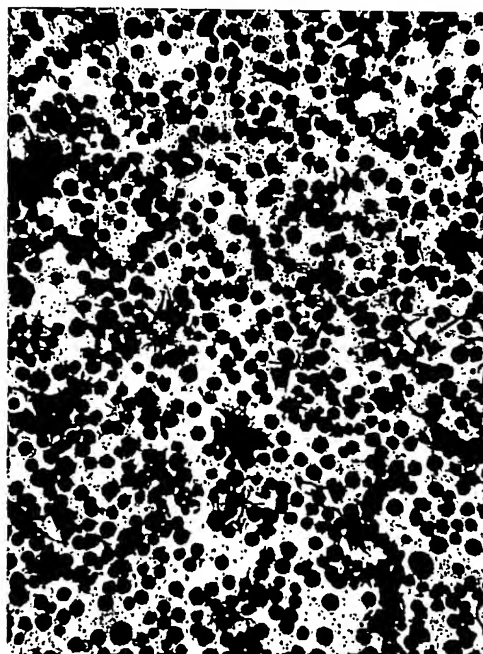


Figure 3A

Action of Nicotinic Acid at RUP25
Expressing Melanophores

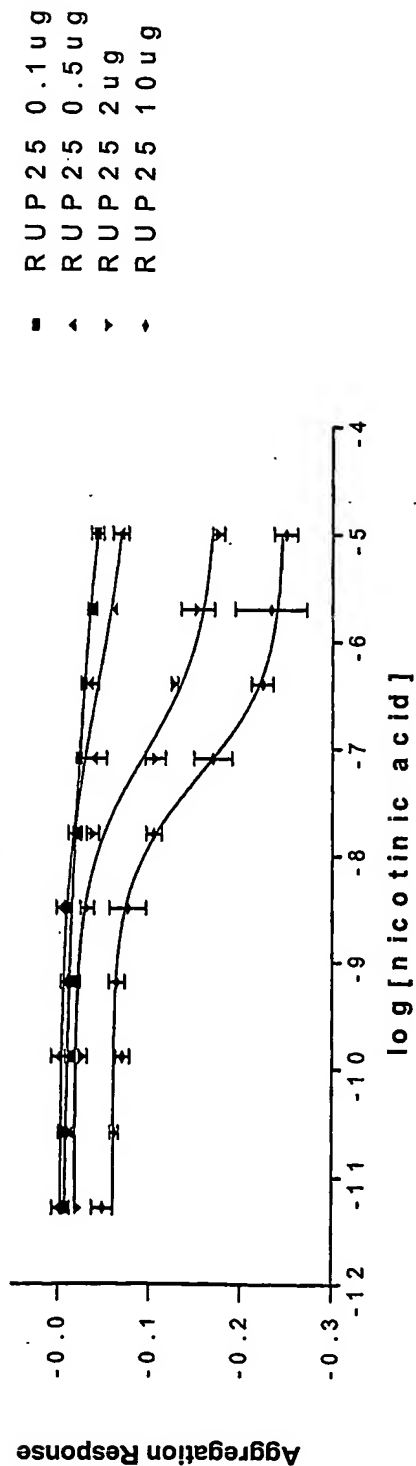


Figure 3B

Nicotinic Acid Control Cells

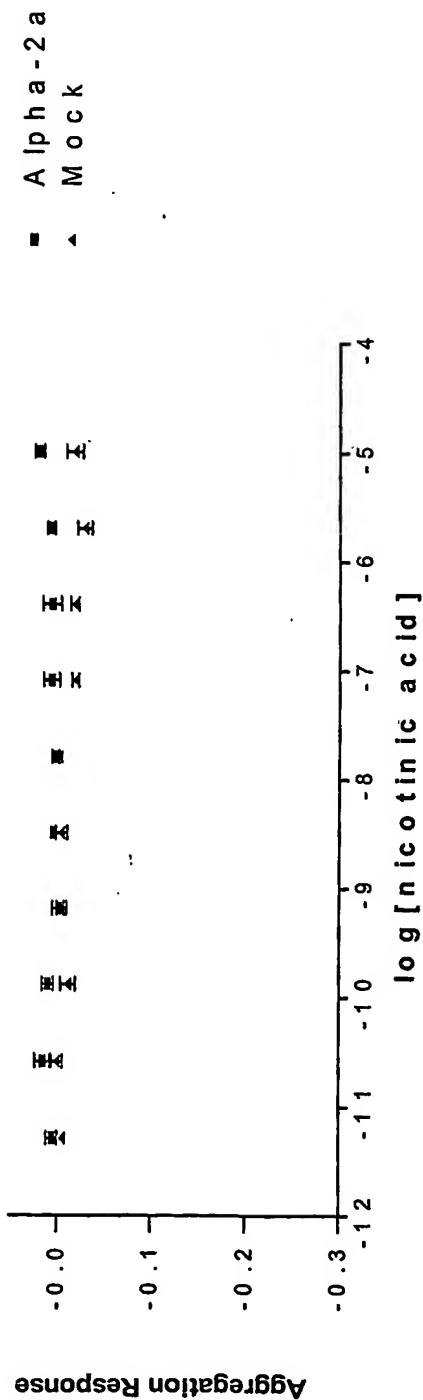


Figure 4
Nicotinic acid induced-IPs accumulation in 293 cells
co-expressing hRUP25 and GqΔGi

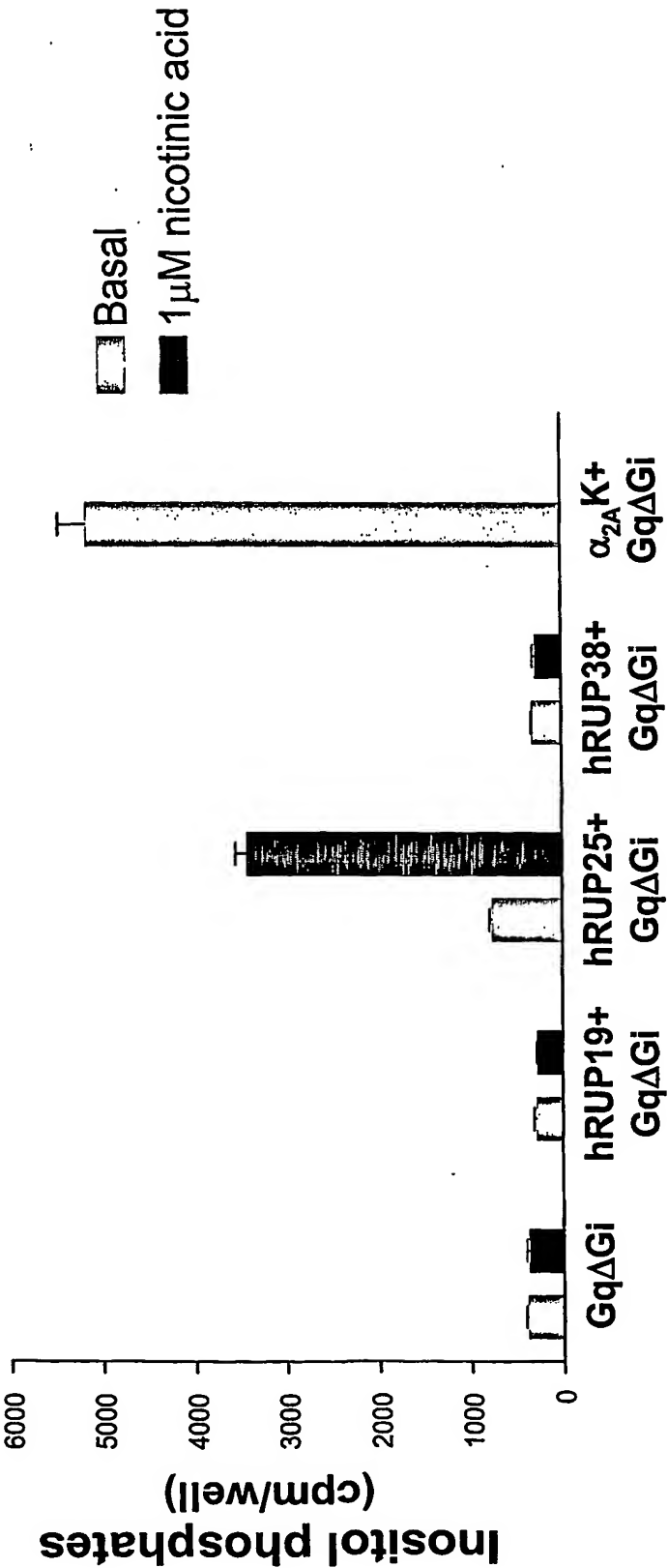


Figure 5A
hRUP25-CHO stable clone identified by anti-HA
immunofluorescence staining

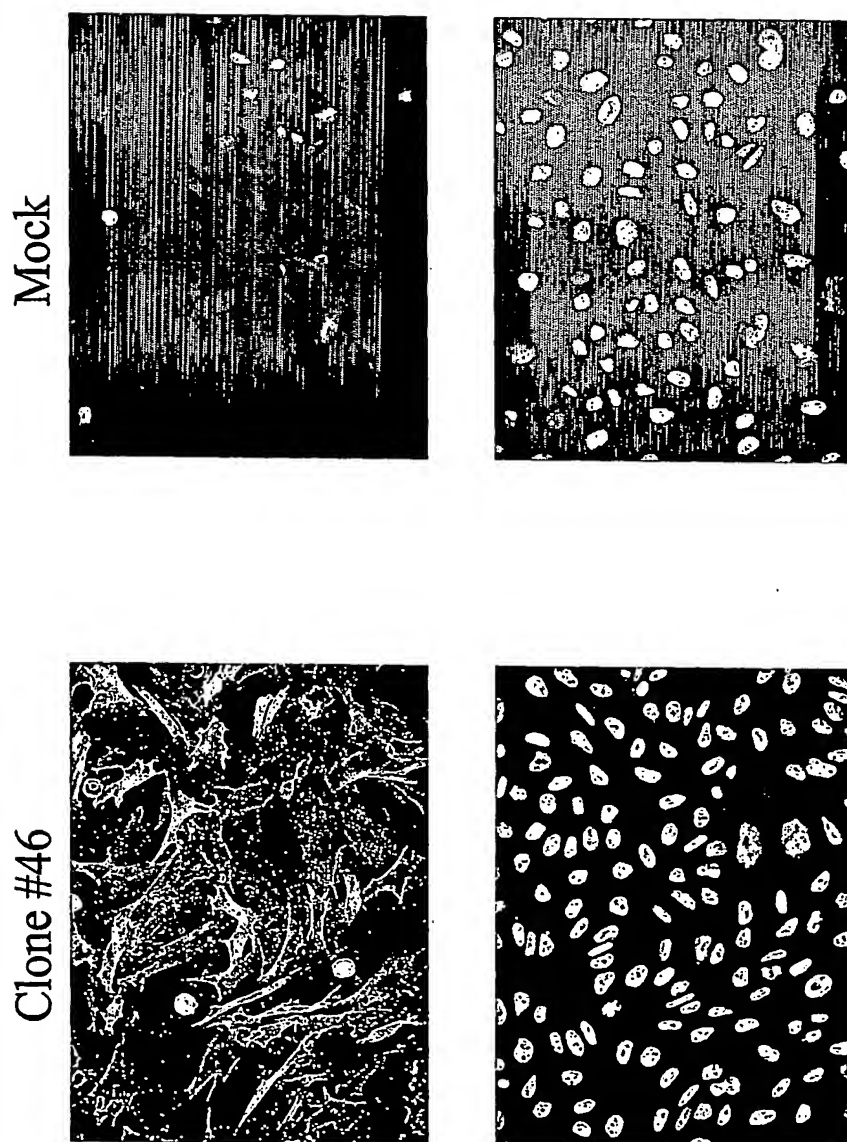


Figure 5B
Nicotinic acid and nicotine induced-inhibition of
forskolin stimulated cAMP accumulation in hRUP25-
CHO cell stable line #46

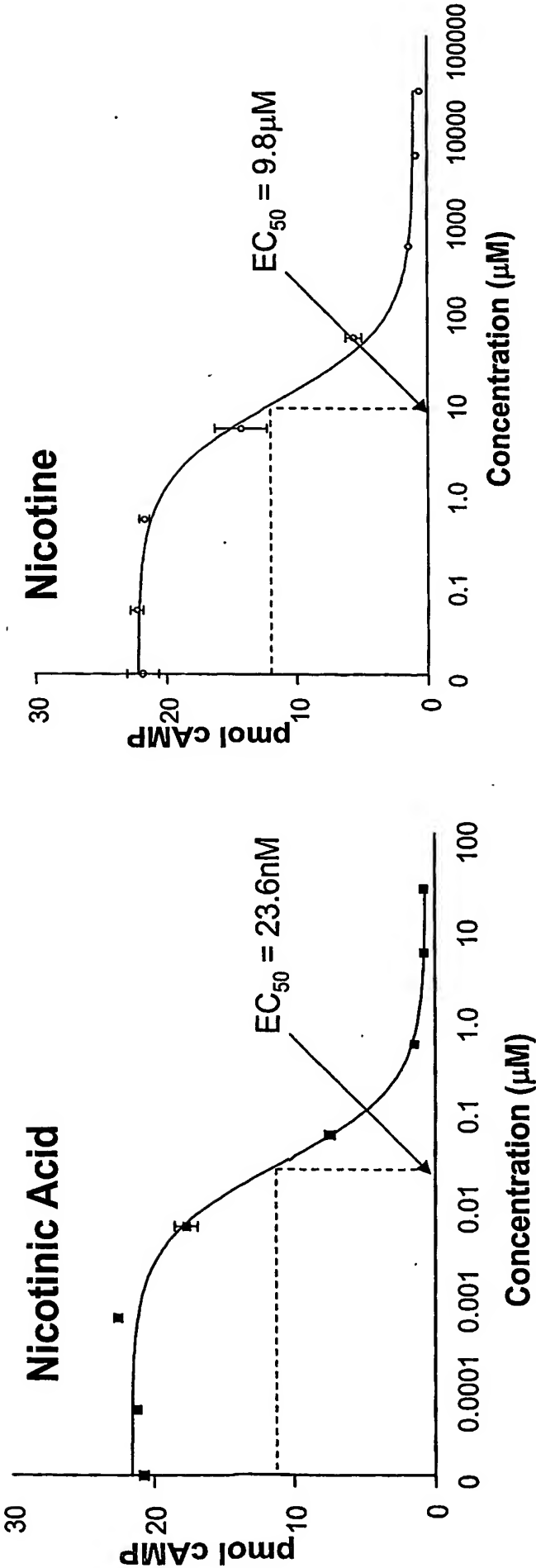


Figure 6
hRUP25 and mRUP25 inhibit TSHR induced-cAMP accumulation following activation by nicotinic acid

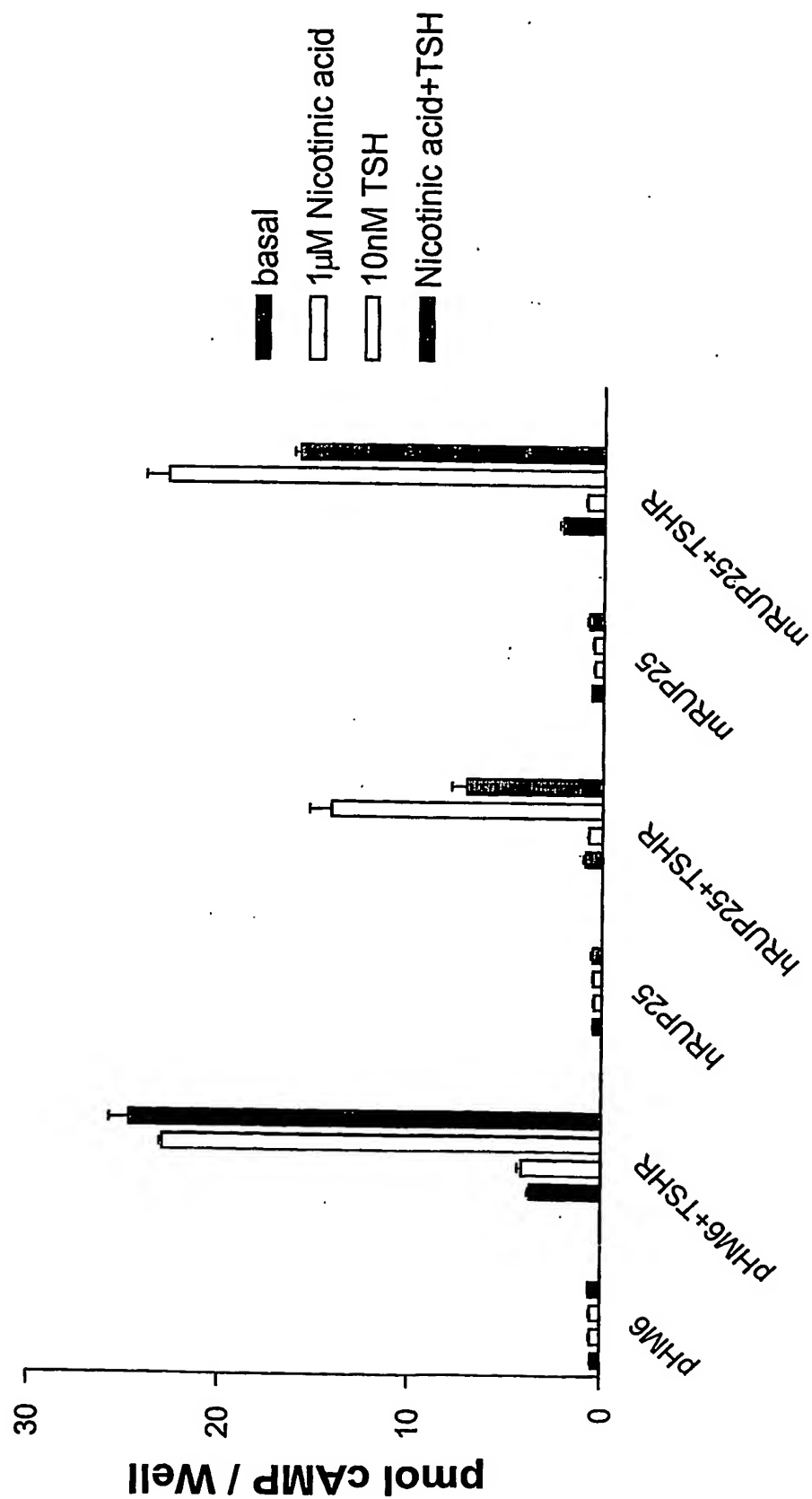


Figure 7
hRUP25 and mRUP25 bind to nicotinic acid
specifically and with high affinity

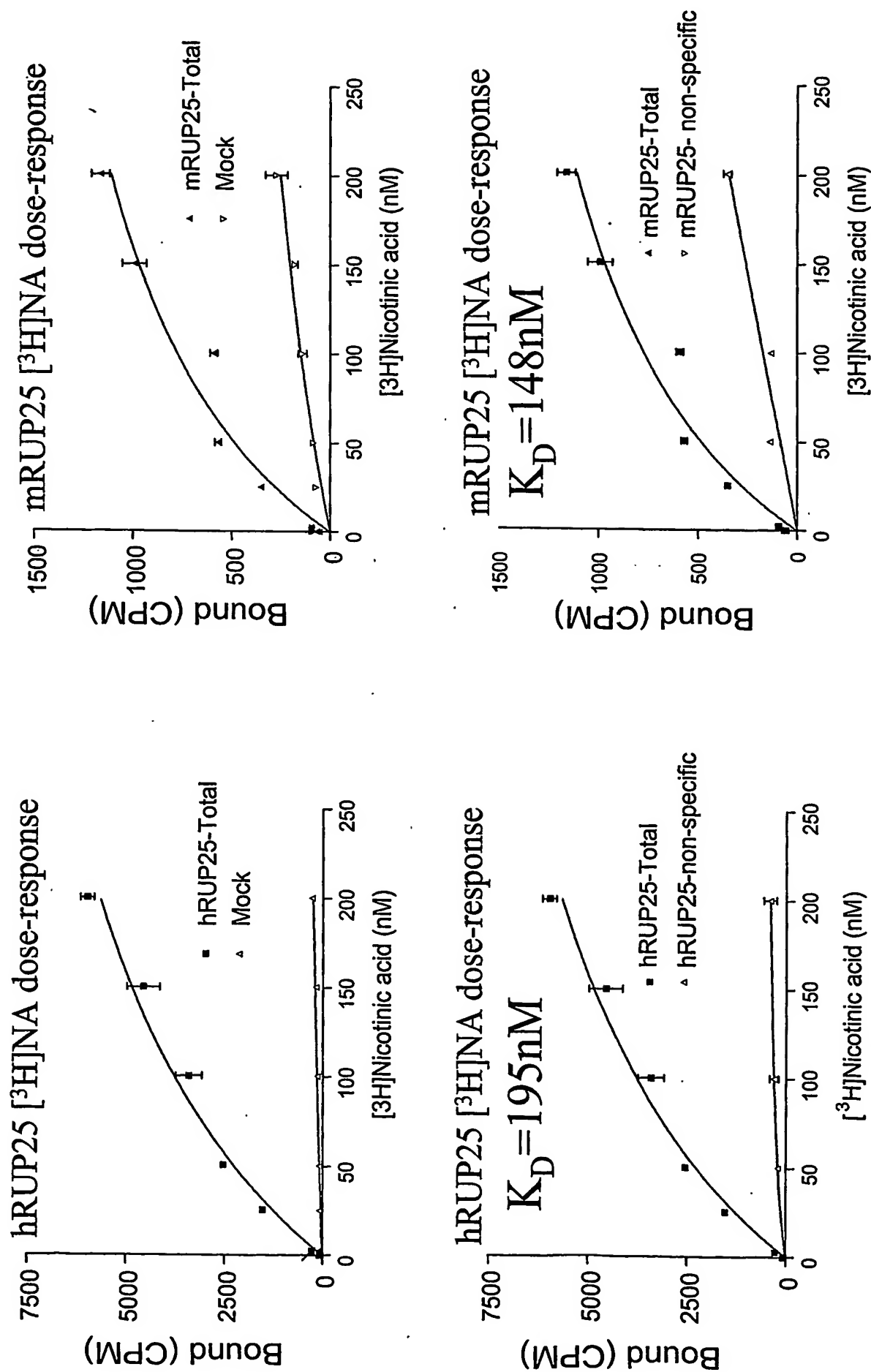


Figure 8

the rank order of potency of compounds on hRUP25 closely matches that of the pharmacologically defined nicotinic acid receptor

Compound	EC 50 (μM)			
	Adipocytes*	Spleen*	hRUP25†	hRUP25 (K_d)‡
Nicotinic acid	1.42	0.703	0.04	0.14
Pyridazine-4-carboxylic acid	3.76	3.14	N.D.	2.19
Acipimox	10.3	6.56	2	2.68
3-Pyridine-acetic acid	16.4	21.8	3	1.64
Pyrazine-2-carboxylic acid	26	22	4	4.14
5-Methylnicotinic acid	30.2	30.0	7	3.58
5-Methylpyrazine-2-carboxylic acid	52.0	14.5	7	7.36
6-Methylnicotinic acid	72.6	53.7	34	21.95
Nicotinic acid-1-oxide	80.4	73.7	120	55.25
2-Hydroxynicotinic acid	132	N.D.	130	145.4
Furane-3-carboxylic acid	142	N.D.	110	130.6
Nicotinamide	>1000	>1000	>1000	128.2
N.D., not determined.				

* From Lorenzen, A. et. al. *Mol. Pharmacol.* 59 (2):349-357, 2001.

† Arena data, inhibition of forskolin-induced cAMP production in hRUP25-CHO stable line #46.

‡ Arena data, [3H]nicotinic acid radioligand binding assay on membranes derived from hRUP25-CHO stable line #46.

Figure 9A
Nicotinic acid and related compounds inhibit isoproterenol induced lipolysis in rat epididymal fat derived adipocytes

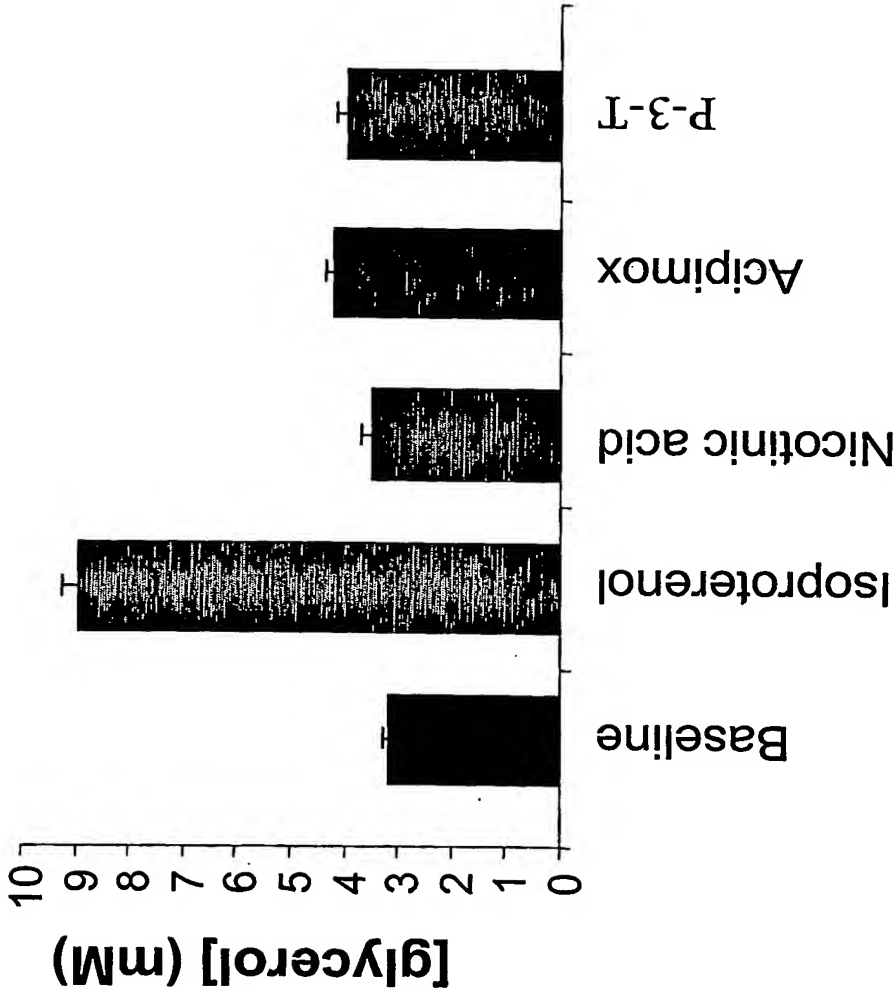


Figure 9B
Nicotinic acid dose-dependent inhibition of isoproterenol induced-lipolysis in rat, epididymal fat derived adipocytes

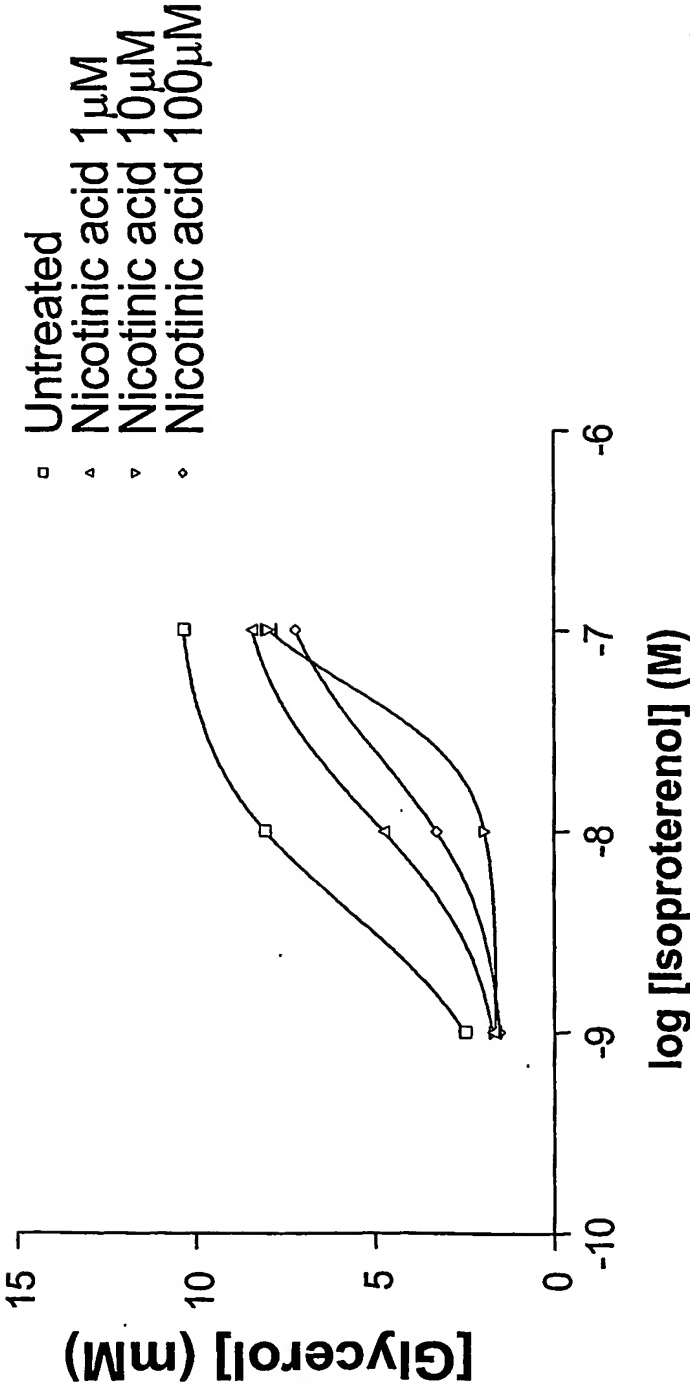
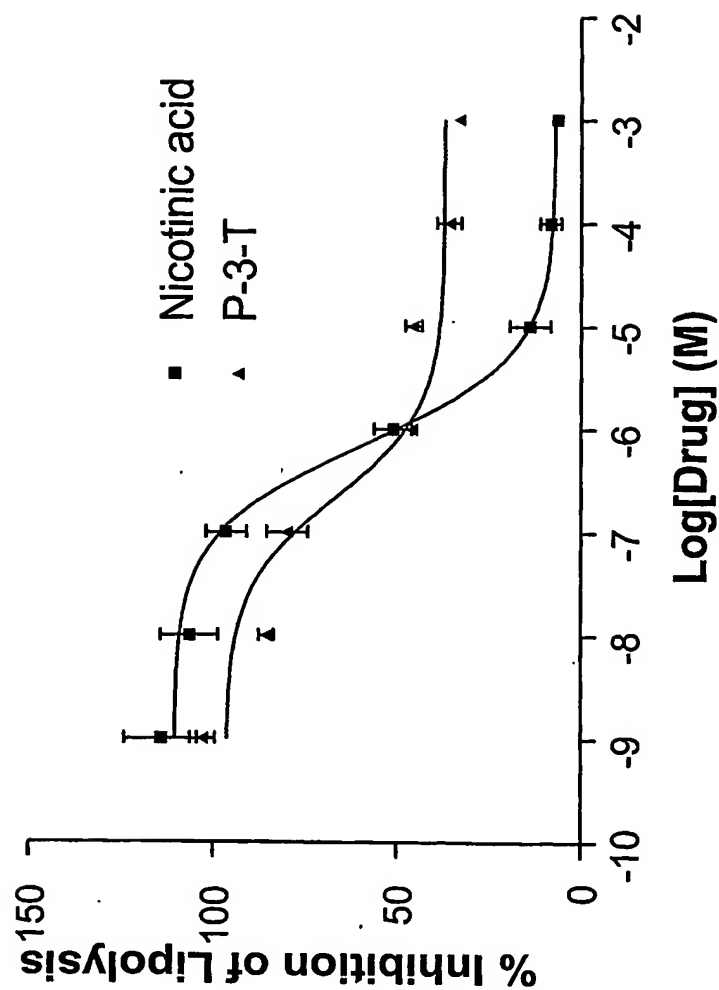


Figure 10
Dose-dependent inhibition of isoproterenol induced-lipolysis
in human, subcutaneous-derived, primary adipocytes *via*
nicotinic acid and P-3-T



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